



Native Plant News

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www.npss.sk.ca



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Summer 2013

Rare plants on display



PHOTOS BY CANDACE AND CHET NEUFELD

ABOVE – Woolly gromwell (*Lithospermum ruderale*) found during the Southwest Corner Tour in Cypress Hills on June 22 and 23.
RIGHT – Smooth Cliffbrake (*Pellaea glabella* ssp. *occidentalis*) found in the Cypress Hills, a new location for Saskatchewan.



By CHET NEUFELD
NPSS Executive Director

The NPSS has once again been busy with field tours. While the weather didn't always cooperate, we managed to have some good times and find a lot of interesting and rare plants. Here's a breakdown of the tours for 2013.

Peggy McKercher Conservation Area Tour - May 25

The summer tour schedule started out with a tour to the Peggy McKercher Conservation Area on the outskirts of Saskatoon.

This is an area in transition; it has recently been acquired by the Meewasin Valley Authority but had been a Catholic Church retreat for a number of years. As such, there was a mix of introduced and native plants, and signs of human use which will be remediated as the site is brought back to a more natural state.

Continued on Pages 4, 5 & 6

2

NPSS could use a few good board members

3

Getting to the root of an invasive problem

7

NatureCity Festival draws 1,200 people

8

Holts win Spot the Crocus contest, again

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Native Plant News is a quarterly publication of the Native Plant Society of Saskatchewan (NPSS) and is one of the benefits of membership. Members are invited to submit articles, news, views, photographs and comments. Views expressed by the authors are not necessarily those of the NPSS.

Deadlines:

	Submission	Publication
Winter Issue:	November 1	December 15
Spring Issue:	February 1	March 15
Summer Issue:	May 1	June 15
Fall Issue:	August 1	September 15

Membership Dues (Year end November 30th)

Individual \$30

Family \$45

Student \$15

Corporate \$200

Life \$500

Please contact the NPSS office for information about the lifetime membership instalment payment option.

In search of a few good plants, board members

I hope that everyone enjoyed their summer! So far at least. As I glance out the window I am continually reminded of what an odd summer we've experienced.

The grass was so green at the end of July and this is nearly unheard of, or at least it is here in the south east corner of the province!



**SHELLEY
HEIDINGER**

PRESIDENT'S MESSAGE

But the green came at a high cost as many of us throughout the province have experienced some of the most extreme weather we've ever seen! Tornadoes, hail and heavy rains have been a regular occurrence and the temperatures sure aren't what they usually are as it's been quite cool.

I sure hope none of you have experienced the darker side of summer up close and if so, that you remained unscathed.

I guess this reminds us that we should never take Mother Nature for granted, although she was certainly in a good mood for most of our south east tour of the Estevan area in mid-July (see cover story). I was able guide our small group around the Estevan area to experience not only the variation in weather but also in plant life and environments – from the side of the Souris Valley to the prairie upland!

The group saw many native plants unique to the south east corner of the province, but the most exciting find of the weekend was our very last stop where we found a patch of Buffalo grass (*Bouteloua dactyloides*)! This was such an exciting experience as none of us had ever seen it before!

Many other exciting finds were experienced during our other NPSS tours. I hope you were able to attend one of the tours in your area!

While we enjoyed the search for rare and special plants, we are also searching for new board members. The Society will be seeing several of our board members step down this fall for various reasons.

If you or anyone you know might be interested in serving on the Board for a term (or two!), please contact myself or Chet for more information (our contact information is to the left of this message).

It would be particularly helpful if you had some experience in one or more of the following: business, finance, graphic design, marketing or communications.

I wish everyone the best of times as we move from summer into fall and I sure hope Mother Nature is good to you! *

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PHOTOS BY DIEGO STEINAKER

Experimental plot with minirhizotron at the center in northeast Montana.

Getting to the root of invasive wheatgrass

By *VASILIKI BALOGIANNI*
PhD Student in Plant Ecology,
University of Regina

When new exotic species appear in established ecosystems among native species it is referred to as an “invasion”.

Invasive plants may co-exist with the natives, but they sometimes cause a complete shift in species composition, which is considered one of the greatest environmental changes both on local and global scales. Exploring the effects of plant invasions on ecosystem characteristics and functions is crucial for predicting future environmental costs and benefits, and for designing restoration attempts of invaded ecosystems.

Plant growth in prairie is mainly controlled by below ground resources such as water and nitrogen. Also, most plant competition occurs below-ground. Thus, changes in plant species are strongly expected to affect below-ground factors such as root length, and the mass of stored soil carbon. Therefore, understanding the impact of invasions below ground is crucial for vegetation management.

Many studies have been conducted regarding the effectiveness of the restoration attempts such as grazing and herbicides. However, many studies focused on parameters like above ground productivity, while only a few studies considered roots.

Our research is focusing on the below ground effects of the invasive perennial bunchgrass crested wheatgrass (*Agropyron cristatum*).

Crested wheatgrass, an exotic species from Asia, currently occupies 6 to 11 million hectares of grassland in the Great Plains of North America. It commonly exists in near-monoculture conditions.

While much knowledge has been accumulated about its management through restoration attempts over the past decades, control of crested wheatgrass remains elusive. Our research questions whether mowing, as a surrogate for grazing, can decrease the root length of crested wheatgrass relative to the native grasses. In order to answer this question we conducted a five-year field experiment.

Minirhizotrons (transparent tubes) were installed beneath prairie at Medicine Lake Wildlife Refuge in Montana and underground images of roots, fungi and insects were captured periodically during the growing season. This continuous, non-destructive method allowed accurate observations at great depths.

Early results indicate the root length of crested wheatgrass is up to four times greater than that of native species. Mowing did not have any effect on roots of either crested wheatgrass nor native grasses, and thus it might not be an appropriate management tool for controlling crested wheatgrass.

In summary, crested wheatgrass has much more root length than native grassland species. Consequently, it is likely more efficient in using the limited below ground resources than natives. As root dynamics are not affected by mowing, crested wheatgrass management should focus on alternative techniques.*

Upcoming Events

September 2013

Nature Saskatchewan Fall Meet

September 20 to 22

Meadow Lake, Sask.

The Meadow Lake branch of the Junior Forest Wardens invites you to Saskatchewan's Northern Boreal Forest surrounding the community and provincial park of Meadow Lake. Try your hand at canoeing and wilderness skills, and learn about the northern boreal forest and the Junior Forest Wardens.

<http://www.naturesask.ca>

Soil Workshop

Saturday, September 21

Station 20 West, 1120 20 St. W.
Saskatoon, Sask.

Learn how to keep your soil healthy and productive in an interactive, hands-on workshop. Contact Jared Regier, Backyard Garden Program Coordinator for more information at jared@chep.org
<http://www.ecofriendlysask.ca>

October 2013

Weed Webinar Series: Absinth Wormwood

Wednesday, October 23

Join us for a Ministry of Agriculture hosted webinar on Wednesday, Oct. 23 at noon. Nadia Mori will explain the biology and characteristics of the plant while Lorne Klein will discuss control options and their feasibility in perennial forage stands. Register using the link below or call for more information. *Note you may join the webinar by computer or phone.*

Nadia Mori: 306-946-3219

Lorne Klein: 306-848-2382.

<https://www2.gotomeeting.com/register/354170002>.

January 2014

Native Prairie Restoration/Reclamation Workshop:

Stretching our Boundaries"

January 29 and 30, 2014

Radisson Plaza Hotel Saskatchewan
Regina, Sask.

Save the date. Details to come.

www.pcap-sk.org

To submit your native plant related event to our events list, send your information (including date, contact, phone number and location) to info@npss.sk.ca.

Summer tours successful despite weather

Continued from Page 1

It was fitting that our visit was part of the NatureCity Festival, as the festival was meant to connect people with nature and make us question how we can better interact with it. Despite the stormy weather that day, the rain (mostly) held off but participants still got their feet wet from crossing a creek that had been created by runoff.

Thanks to the Meewasin Valley Authority for allowing us to get a sneak peek of this new conservation area.

Northeast Corner Tour - June 15 & 16

Although this tour was the one I was most excited about, unfortunately the weather had other ideas for the day. A severe weather warning forced us to cancel the tour due to safety reasons, but we plan to try again next year. Tour leaders Glen and Maureen Lee and Dave and Alice Biggs visited the site during the weekend and confirmed that the timing was right to see all of the fantastic wildflowers on offer, so now all we have to do next year is cross our fingers and hope that it doesn't rain!

Southwest Corner Tour - June 22 & 23

A small but intrepid group of NPSS members embarked on the Southwest Corner tour, which had us trying to relocate historical populations of rare plants

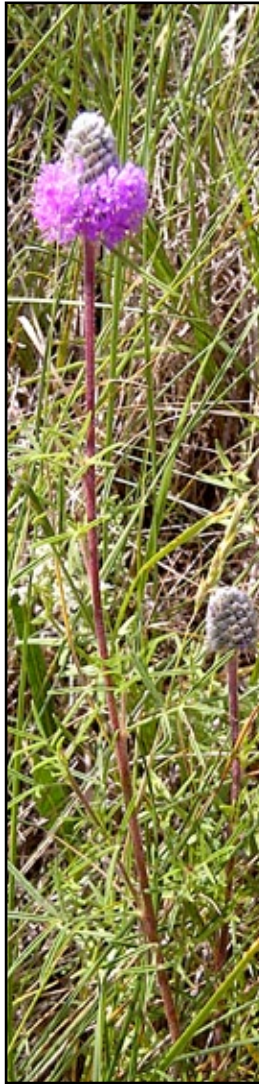


PHOTO BY SHELLEY HEIDINGER
Purple Prairie Clover
(*Dalea purpurea*) in the
Estevan area.



PHOTO BY CANDACE NEUFELD

Southwest Corner Tour participants cross the Battle Creek.



PHOTO BY SHELLEY HEIDINGER

Western Canada Violet (*Viola canadensis*)
found near Roche Percee on the
Southeast Corner Tour.

in the rugged hills of the West Block of Cypress Hills Interprovincial Park.

A historical population means that it hasn't been relocated in 30 years, and we were looking for a population of Cut-leaved Alumroot (*Heuchera parvifolia*) that hadn't been seen since it was first spotted in 1982, and also a population of Woolly Gromwell (*Lithospermum ruderales*) from 1959!

The going was not easy – almost immediately we were forced to wade across Battle Creek and then had a few kilometers of hiking straight uphill. However, we were rewarded by relocating the Cut-leaved Alumroot population.

We also found a population of Smooth Cliffbrake (*Pellaea glabella* ssp. *occidentalis*) growing near the Cut-leaved Alumroot. Smooth Cliffbrake is

a rare plant in Saskatchewan (S2) with only 8 general locations in the province, none of which are in the southwest (the closest is hundreds of kilometers away in the Big Muddy region).

Another rare plant (S2) we came across was Tall Pussytoes (*Antennaria anaphaloides*), which occurred mostly in one fairly large patch, although we did find it in two other locations that were several kilometers away. We also found Bent-flowered Milkvetch (*Astragalus vexilliflexus* var. *vexilliflexus*), a small plant with striking purple flowers that is also quite rare (S2) in Saskatchewan.

Our efforts on day 2 were also not in vain as we were able to relocate the Woolly Gromwell population, and found others which may or may not have been part of the original record. We also found



PHOTO BY CANDACE NEUFELD

Cut-leaved alumroot (*Heuchera parvifolia*) located in the Cypress Hills for the first time since 1982.

a population of Low Yellow Evening-primrose (*Oenothera flava* ssp. *flava*) very near the Woolly Gromwell, which was guarded by about a million mosquitoes!

Everyone had a great time, however, and the information that we collected will go to the Conservation Data Centre to help them monitor these species. Thanks to Fort Walsh National Historic Site and the Little Pine First Nation for



PHOTO BY CHET NEUFELD

Tall Pussytoes (*Antennaria anaphaloides*).



PHOTO BY CANDACE NEUFELD

Participants explore the Cypress Hills for native plants on the Southwest Corner Tour.

letting us explore this beautiful corner of Saskatchewan.

Northwest Corner Tour - June 30 to July 1

Due to a number of factors, the northwest tour had to be cancelled, but we plan to try again next year as this is an area that we'd really like to explore and our Past President Tara Sample is very knowledgeable on the area.

Southeast Corner - July 13 & 14

The weekend started out with a tour of Watershed Security Agency land on the north side of Rafferty Dam (NE 34-2-9 W2). This area has a treasure trove of species found in southern Saskatchewan.

We found Western Red Lily (*Lilium philadelphicum* var. *andinum*), Indian Breadroot (*Pediomelum esculentum*), Silver-leaf Psoralea (*Pediomelum argophyllum*), Shrubby Evening Primrose (*Calylophus serrulatus*), Smooth Aster (*Symphyotrichum laeve*), Purple Coneflower (*Echinacea angustifolia* var. *angustifolia*) - S3, Wild Blue Flax (*Linum lewisii*), Crocus (*Pulsatilla patens*), Gaillardia (*Gaillardia aristata*), Seneca Root (*Polygala senega* var. *senega*), Low Goldenrod (*Solidago missouriensis*), Pussytoes (*Antennaria* spp.), Purple Prairie Clover (*Dalea purpurea*), Pincushion Cactus (*Escobaria vivipara*), Prickly Pear Cactus (*Opuntia polyacantha* var. *polyacantha*), Yellow Umbrella-plant (*Eriogonum flavum* var.

flavum), Dwarf Milkweed (*Asclepias ovalifolia*), Prairie Cinquefoil (*Potentilla pensylvanica* var. *pensylvanica*), Scarlet Mallow (*Sphaeralcea coccinea*), Wavy-leaved Thistle (*Cirsium undulatum* var. *undulatum*), Three-flowered Avens (*Geum triflorum*), Western Wallflower (*Erysimum capitatum*), Scarlet Guara (*Guara coccinea*), Wild Licorice (*Glycyrrhiza lepidota*), Blue Lettuce (*Lactuca tatarica*), Club-moss (*Selaginella densa*), Rough Fescue (*Festuca*

Continued on Page 6



PHOTO BY SHELLEY HEIDINGER

Purple Coneflower (*Echinacea angustifolia* var. *angustifolia*).

Summer tours

Continued from Page 5

altaica ssp. *hallii*), Western Porcupine Grass (*Hesperostipa curtisetia*), Needle & Thread Grass (*Hesperostipa comata*), Green Needle Grass (*Nassella viridula*), Little Bluestem (*Schizachyrium scoparium*), Big Bluestem (*Andropogon gerardii*) - S3S4, Blue Grama (*Bouteloua gracilis*), Side-oats Grama (*Bouteloua curtipendula* var. *curtipendula*) - S3, Wheatgrasses (*Pascopyrum*, and *Leymus* spp.) and other typical species of grass.

Saturday afternoon we visited with Hugh and Heather Schnell at their organic farm south of Torquay and at an area on their land (SW 24-1-12 W2). This patch of native prairie is located on the highest hill in the area and is also associated with a lot of history!

It was used by the Boundary Commission to help located the 49th parallel and has markers permanently situated on and around the hill from that time. It is also a "hot" spot; as a higher point it caught radiation drift from nuclear testing in the southern United States decades ago. If you meet Hugh, ask him about his hill!

The Schnell's usually burn the area



PHOTO BY SHELLEY HEIDINGER

Female Buffalograss (*Bouteloua dactyloides*) near the Buffalograss Provincial Ecological Reserve southwest of Estevan.

every 3 to 5 years for maintenance purposes. At this site we found Purple Prairie Clover, Scarlet Mallow, Hairy Golden Aster (*Heterotheca villosa*), Silver-leaved Psoralea, Pasture Sage (*Artemisia frigida*), Skeletonweed (*Lygodesmia juncea*), Yarrow (*Achillea millefolium*), Goldenrod (*Solidago* spp.),

Clustered Oreocarya (*Oreocarya celosoides*), Prickly Pear Cactus, Richardson's Alumroot (*Heuchera richardsonii*), Pale Comandra (*Comandra pallida*), Western Wallflower, Crocus, Harebell (*Campanula rotundifolia*), Sunflower species (*Helianthus* spp.), Blue Grama, Needle & Thread Grass, Green Needle Grass, Western Porcupine Grass, Western Wheatgrass (*Pascopyrum smithii*) and Northern Wheatgrass (*Elymus lanceolatus*), and many more.

Sunday morning started with a tour of SaskPower Shand Greenhouse where roughly 25 different species of native trees and shrubs are grown

for distribution around Saskatchewan for various types of environmental projects. Native forb and grass species are grown for groups and organizations that often have a specific seed source and require someone to grow it for them.

After touring the greenhouse, the group made their way to nearby Roche Percee where the Roche Percee Rock area (SE 30-1-6 W2) was visited. A number of species were seen here including Violets (*Viola* spp.), Fairy Bells (*Disporum trachycarpum*), Purple Coneflower, Western Red Lily, Scarlet Guara, Yellow Flax (*Linum rigidum*), Blue Wild Flax, White Milkwort (*Polygala alba*) - S3, White Prairie Clover (*Dalea candida*), Purple Prairie Clover, Yellow Evening Primrose (*Oenothera biennis*), Sand Reed Grass and Western Porcupine Grass.

As the last stop of the day, we headed toward the Buffalograss Provincial Ecological Reserve located southwest of Estevan. We actually didn't make it to the reserve itself as we found male and female Buffalograss (*Bouteloua dactyloides*) just south of the reserve. Several good sized patches of Buffalograss were located and provided a great photo opportunity! This was such a great way to end our tour!

Thanks to Shelley Heidinger, SaskPower, Saskatchewan Water Security Agency, and Hugh and Heather Schnell.

For more photos of our tours, visit our Facebook page. 🌻



PHOTO BY SHELLEY HEIDINGER

White Milkwort (*Polygala alba*) on the Southeast Corner tour.

Nature festival an urban hit

By CHET NEUFELD
NPSS Executive Director

On May 25 to 31, Wild About Saskatoon, a collective of over 70 organizations, hosted Saskatoon's first ever NatureCity Festival.

The week-long event was designed to connect people with nature in various ways and to raise awareness about our natural world and our impact on it. The timing of the festival was also planned to be a celebration of the blooming of the saskatoons (*Amelanchier alnifolia*), from which the city gets its name.

Over the course of the week, approximately 1,200 people attended over 50 events held across the city that ranged from bird and botany walks to music performances, nature presentations, art installations, local food events and everything in between!

Douglas Olson, a Landscape Architect with O2 Planning + Design, was the keynote speaker and talked about how cities can better co-exist with nature.

"We were thrilled to have Douglas Olson speaking at the gala," said Candace Savage, prominent author and one of the key organizers. "With his exceptional, international experience in urban design and landscape architecture, he was ideally



PHOTO BY CHET NEUFELD

Participants prepare for a botany walk at the Peggy Mc KERcher Conservation area.

qualified to help us understand how we can plan to conserve the wildness we have within our own urban environment."

For its part, the NPSS hosted two events; the botany walk held at the Peggy Mc KERcher Conservation Area and the flash mob native wildflower



planting at Donna Birkmaier Park. This park is one of Saskatoon's naturalized parks, which contain areas of natural habitat.

By planting small islands of wildflowers, it is hoped that they will serve as a seed source for the park

and will enable the spread of wildflowers across the area. The seeds came from the now retired NPSS/WSA nursery and were raised in the Shand Greenhouse in Estevan. They were planted by City of Saskatoon employees and festival volunteers, so it was truly a group effort. There were even two members from the California Native Plant Society helping out!

The NPSS is one of the founding organizers of Wild About Saskatoon and the NatureCity Festival, and we are proud to have been involved with such a successful venture. Due to the success of the event and the importance of the cause, Wild About Saskatoon has decided to continue the festival in some form in 2014, so stay tuned for details.

Thanks to all of the groups involved and all of the festival sponsors. For more information on the event, go to www.wildaboutsaskatoon.org. Photos of the NPSS events can also be found on our Facebook page at www.facebook.com/npss.sk.



PHOTO BY CHET NEUFELD

Volunteers at the flash mob planting at Donna Birkmaier Park.

Holts are the Spot the Crocus Contest Winners, AGAIN!

Although most of us thought spring would never come after the winter that we had, eventually warm weather did prevail and the crocuses came out.

And once again, the keen eyes of Neal and Margaret Holt spotted the first Crocus (*Pulsatilla patens*) near their home in the Regina area on April 29, - a full month later than our first crocus last year!

Neal had this to say about the sighting: "We found them on April 29th and the next day they were buried in 15 cm of snow!"

Runners up include Chet Neufeld (May 3), Glenda Samuelson (May 5) and Mark Brown (May 6). These sightings will be sent to Plant-Watch, a program that uses citizen scientists to submit blooming times to help monitor climate change.

Congratulations to Neal and Margaret Holt. If memory serves, they have won three out of the last four Spot the Crocus contests. *



FILE PHOTO BY DAWN INKSTER

Crocus (*Pulsatilla patens*).

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